

CLAIMS

WHAT IS CLAIMED IS:

1. A bow stabilizer for an archery bow, the stabilizer comprising an elongated member having a near end for attachment to an archery bow and a distal end, the elongated member having a length L , and a weight attached to the elongated member proximate the distal end, wherein the center of gravity of the elongated member and weight is located within 25 percent of length L from the distal end of the elongated member.
2. The stabilizer of claim 1, wherein a first mass $M1$, of the weight is at least 1.2 times a second mass $M2$ of the elongated member.
3. The stabilizer of claim 1, wherein the weight is disk-shaped.
4. The stabilizer of claim 1, wherein the weight has a dimension D in a direction normal to the length L of the elongated member which is at least three times a thickness T of the weight in the same direction as the length of the elongated member.
5. The stabilizer of claim 1, wherein the elongated member is a rod.
6. The stabilizer of claim 1, wherein the elongated member is a hollow rod.
7. The stabilizer of claim 1, wherein a natural frequency of the first bending mode of the elongated member and weight is at least 20 Hz.
8. The stabilizer of claim 1, wherein a natural frequency of the first bending mode of the elongated member and weight is at least 40 Hz.
9. An archery bow having at least one front stabilizer, the front stabilizer having a near end fixed to the bow, a distal free end, and a length L , the center of gravity

of the front stabilizer being located within a distance D of 25 percent of the length L of the distal end of the stabilizer.

10. The archery bow of claim 9, wherein the distance D is within 15 percent of the length L of the distal end of the stabilizer.

11. The archery bow of claim 9, wherein the stabilizer comprises an elongated member and a weight disposed on the elongated member proximate the distal end thereof.

12. The archery bow of the claim 11, wherein the elongated member is a rod and the weight has a disk shape.

13. The archery bow of claim 11, wherein the weight has a dimension D in a direction normal to a length L of the elongated member which is at least three times a thickness T of the weight in the same direction as the length of the elongated member.

14. The archery bow of claim 11, wherein a first mass $M1$, of the weight is at least 1.2 times a second mass $M2$ of the elongated member.

15. The archery bow of claim 11, wherein the elongated member is a rod.

16. The archery bow of claim 11, wherein the elongated member is a hollow rod.

17. The archery bow of claim 9, wherein a natural frequency of the first bending mode of the stabilizer is at least 20 Hz.

18. The archery bow of claim 9, where in a natural frequency of the first bending mode of the stabilizer is at least 40 Hz.

19. A stabilizer for an archery bow, the stabilizer comprising an elongated member having a near end for attachment to an archery bow, a distal end, and a weight attached to the elongated member proximate the distal end, wherein a natural frequency of the first bending mode of the elongated member and weight is at least 20 Hz.
20. The stabilizer of claim 19, wherein the natural frequency is at least 40 Hz.
21. The stabilizer of claim 19, wherein the elongated member is a rod.
22. The stabilizer of claim 19, wherein the elongated member is a hollow rod.
23. The stabilizer of claim 19, wherein the weight is disk shaped.
24. The stabilizer of claim 19, wherein a first mass M_1 of the weight is at least 1.2 times a second mass M_2 of the elongated member.
25. An archery bow having at least one front stabilizer attached thereto, the front stabilizer having a natural frequency of the first bending mode of at least 20 Hz.
26. The archery bow of claim 25, wherein the natural frequency of the first bending mode is at least 40 Hz.
27. The archery bow of claim 25, wherein the front stabilizer comprises an elongated member having a near end attached to the bow, and a distal free end having a weight thereon proximal to the distal end.
28. The archery bow of claim 27, wherein a first mass M_1 of the weight is at least 1.2 times a second mass M_2 of the elongated member.
29. The archery bow of claim 27, wherein a first mass M_1 of the weight is at least 2 times a second mass M_2 of the elongated member.

30. A stabilizer for an archery bow, the stabilizer comprising an elongated member having a near end for attachment to an archery bow and a distal end, and a weight attached to the elongated member proximate the distal end, the weight having a first mass $M1$ which is at least 1.2 times a second mass $M2$ of the elongated member.

31. The stabilizer of claim 30, wherein the first mass $M1$ is at least two times the second mass $M2$.

32. The stabilizer of claim 30, wherein the weight has a dimension D normal to the elongated member and a thickness T along a length L of the elongated member, wherein the dimension D is greater than the thickness T .

33. The stabilizer of claim 30, wherein the dimension D is at least three times greater than the thickness T .

34. An archery bow having at least one front stabilizer attached thereto, the front stabilizer comprising an elongated member having a near end for attachment to an archery bow, a distal end, and a weight attached to the elongated member proximate the distal end, the weight having a first mass $M1$ which is at least 1.2 times a second mass $M2$ of the elongated member.

35. The archery bow of claim 34, wherein the first mass $M1$ is a least two times the second mass $M2$.

36. The archery bow of claim 34, wherein the weight has a dimension D normal to the elongated member and a thickness T along a length L of the elongated member, wherein the dimension D is greater than the thickness T .

37. The archery bow of claim 34 wherein the dimension D is at least three times greater than the thickness T .